

What Is Claimed Is:

1. A method for determining frame quality in a mobile communication system comprising the steps of:

estimating a signal to noise power ratio of an allocated traffic channel from power control bits (PCBs) extracted from power control groups (PCGs) of a frame received through the traffic channel and a signal received through a pilot channel received during a section of the PCGs in a control hold state; and

comparing the estimated signal to noise power ratio with a preset reference signal to noise power ratio to determine quality of the received frame.

2. The method of claim 1, wherein the signal to noise power ratio is estimated by multiplying a bit to symbol rate ratio of a full rate by a value obtained by dividing the power for the traffic channel of the full rate by the noise power of the received traffic channel.

3. The method of claim 2, wherein the power for the traffic channel of the full rate is estimated by accumulating a value obtained by dividing the power corresponding to the PCB in an arbitrary PCG included in the traffic channel by the power corresponding to the PCB in a pilot channel, during one frame.

4. The method of claim 2, wherein the noise power is the sum of the power of interference signals by users in one cell and different cells.

5. The method of claim 1, wherein a corresponding mobile station or system controls a power control reference value to maintain its target frame error rate in accordance with the determined frame quality.

6. The method of claim 1, wherein an erasure indicator bit value which will be used to control transmitting power of an opposing mobile station or system is determined in accordance with the determined frame quality.

7. The method of claim 1, wherein a corresponding mobile station or system checks a channel of a received signal and determines whether to drop a set call.

8. An apparatus for determining frame quality in a mobile communication system comprising:

a PCB extracting unit for extracting PCBs from PCGs of a frame received through an allocated traffic channel in a state that no data transmission occurs between a mobile station and its control system and the PCBs are only transmitted and received

through the traffic channel;

an SIR estimating unit for estimating a signal to noise power ratio of the traffic channel from the extracted PCBs and a signal received through a pilot channel received during a section
5 of the PCGs; and

a comparator for comparing the estimated signal to noise power ratio with a preset reference value to generate a quality indicator bit of the received frame.

9. The apparatus of claim 8, wherein the noise power is the sum of the power of interference signals by users in one cell and different cells.

10. The apparatus of claim 8, wherein the signal to noise power ratio is estimated by multiplying a value, which is obtained by dividing the power for the traffic channel of a full rate by the noise power of the received traffic channel, by a bit to symbol rate ratio of the full rate.

11. The apparatus of claim 10, wherein the power for the traffic channel of the full rate is estimated by accumulating a value obtained by dividing the power corresponding to the PCB in an arbitrary PCG included in the traffic channel by the power corresponding to the PCB in a pilot channel, during one frame.

